



Committee of the Whole Report

For the Meeting of May 17, 2018

To: Committee of the Whole **Date:** April 27, 2018
From: Fraser Work, Director of Engineering and Public Works
Subject: Laurel Point Park Environmental Remediation

RECOMMENDATION

That Council direct staff to:

1. Bring forward amendments to the 2018 Financial Plan bylaw to add \$3.1 million for the environmental remediation at Laurel Point Park with funding from the Tax Sale Lands Reserve.
2. Approve funding of \$50,000 from contingencies for the removal, storage, and reinstallation of various City assets on Laurel Point federal lands.
3. Authorize the Mayor and City Clerk to execute, on behalf of the City, an Agreement with the federal government as represented by Transport Canada, in a form satisfactory to the City Solicitor, to allow remediation of City land in conjunction with the Transport Canada Middle Harbour Fill Site remediation project.

Subject to Council's consideration of the recommendations noted above:

4. Forward the Committee of the Whole recommendations to the Special Council Meeting of May 17, 2018.

EXECUTIVE SUMMARY

The City owns property at Laurel Point Park which is surrounded by the federal Transport Canada Middle Harbour Fill Site and the Inn at Laurel Point property. The site and adjacent areas were historically occupied by the British American Paint Company (BAPCO) paint factory. In addition to sources of contamination associated with the paint factory, the site was periodically infilled with unknown quality of materials between 1905 and 1978.

The Committee of the Whole report on August 3, 2017 informed Council that initial environmental investigations revealed that the City property at Laurel Point Park is considered a contaminated site, because soil and groundwater quality has been impacted by historical industrial activities. The remediation of the site was estimated at \$1 to \$5 million subject to the results of a risk assessment and remediation plan. Council directed staff to proceed with the next stage of environmental investigation at Laurel Point Park, including a detailed site investigation, risk assessment and remediation plan.

A remediation plan for the adjacent contaminated federal lands has been developed following extensive site investigations and risk assessment by Transport Canada. The remediation plan for the federal lands consists of excavation, offsite disposal and subsequent risk management of residual contamination. Excavation depths of up to seven metres will be required and will be replaced with clean soil. Where excavations are required adjacent to City property, Transport Canada plans to cut or slope back over City property. Contaminants in the cut slope on City property will be removed and disposed by Transport Canada as part of their scope. Soil will be removed from the site by barge and clean soil will arrive by barge. Transport Canada with Public Services and Procurement Canada is preparing to tender their project in June 2018. Site work is planned to start in September 2018 and will continue for 12 to 18 months. During this period the entire site will remain closed to the public.

SLR Consulting Ltd. (SLR) was also retained by the City of Victoria to complete a series of environmental assessments at the Laurel Point Park site in 2016/2017. Based on their investigation results, the City property is considered a contaminated site because various parameters in soil and groundwater were measured at concentrations exceeding applicable regulatory standards including metals; petroleum hydrocarbons; chlorophenols; and polychlorinated biphenyls (PCBs).

SLR completed a risk assessment that identified risks to human and ecological health when exposed to soils directly, or transmitted via underground pathways. Humans exposed to repeated soil disturbances (ie. park workers / construction workers) would require appropriate operational controls and personal protective equipment to avoid hazardous exposures. Ecological risks from soil contamination transmitting to deep rooting plants and marine life cannot practically be controlled through operational means, but only through removal of soil contaminants. Park users are not considered at risk due to their lack of exposure to soil contaminants.

Site specific remediation targets were developed to address these risks, determining what contaminants can be left and managed in place and what requires excavation and offsite disposal. SLR prepared a remediation plan to remove the highest levels of soil contamination which are located at 0-3 metres depth. This is anticipated to reduce concentrations to within acceptable standards and reduce risks to marine and plant ecological systems.

SLR estimates the remediation work can be completed for a cost of \$2.2 million plus applicable taxes and contingency. This assumes the excavation, transport and disposal of contaminated soil in the City property is done in conjunction with the Transport Canada remediation project. Staff recommend a 40% contingency to the remediation estimate. The total project budget including contingency is \$3.1 million.

These costs do not include any shoreline enhancements or reinstatement of the park features such as trees, shrubs, amenities, irrigation and pathway paving. As part of the annual financial plan, staff would develop detailed plans and budgets for Laurel Point Park improvements for 2019 and 2020 for Council's consideration. These designs/plans would also include improvements to the David Foster Harbour Pathway through Laurel Point Park.

If the City proceeds with including the City land remediation work as part of the Transport Canada Middle Harbour Fill Site remediation, Transport Canada will pay for all contractor mobilization costs, including barge access ramps, site security and tender service costs as well as permitting costs and overall project management costs associated with managing a large construction project. These cost savings for the City, including economy of scale savings, are estimated to be in the order of \$1.2 to \$1.5 million.

Laurel Point Park is a valuable waterfront location offering the public panoramic views of the inner

harbour including the downtown core. Environmental remediation to address ecological risks for the long term operation of the park space and David Foster Harbour Pathway is recommended. However, approving this expenditure will leave only approximately \$1.5 million in the Tax Sale Lands Reserve and will therefore result in limited funding availability for other projects including remediation of other portions of the David Foster Harbour Pathway or remediation of other City owned lands should the need arise.

PURPOSE

The purpose of this report is to inform Council of the recently completed environmental risk assessment and remediation action plan at Laurel Point Park and to provide an update on the adjacent remediation work planned by Transport Canada for their property at Laurel Point.

BACKGROUND

The City owns property at Laurel Point which is bordered to the north, east and west by additional federal green space and comprise the Middle Harbour Fill Site, a federal contaminated site under the custodianship of Transport Canada. The Inn at Laurel Point property, located at 680 Montreal Street, is to the south of the site. Victoria Harbour is located 1 to 3 m north of the site boundary. A strip of federal land runs between the City owned land and the harbour. A site plan showing ownership boundaries is shown below.



Figure 1: Overall Site Plan

Prior to 1885, Laurel Point Peninsula was used by First Nations as a place of burial. Laurel Point Park and surrounding areas are located in an area that was used traditionally by the Songhees First Nation. Since 1885, the Laurel Point Peninsula has had a series of owners and land uses most

notably the British America Paint Co Ltd (BAPCO) from 1906 to circa 1975. BAPCO operations included the manufacture of paints, varnishes, and lacquers. Paint and raw products were stored at the site in both underground and above ground storage tanks (see Attachment A for historic photos showing industrial use of lands). The site area has since been filled with unknown quality material over the years and there is evidence of periodic infilling dating back as far as 1905. The last infilling event (1972-1978) followed the demolition of the paint factory, as part of the construction of the existing park and seawall walkway.

The May 2016 and January 2017 staff reports on the David Foster Harbour Pathway identified environmental contaminants and historical land uses as a quantifiable risk for long term pathway development. The Committee of the Whole report on August 3, 2017 informed Council that initial environmental investigations revealed that the City's property at Laurel Point Park is considered a contaminated site, because soil and groundwater quality exceed provincial standards, likely due to historical industrial activities. The remediation was then estimated at \$1 to \$5 million subject to the results of the risk assessment and remediation plan. Council directed staff to proceed with the next stage of environmental investigation at Laurel Point Park, including a detailed site investigation, risk assessment and remediation plan, using funds from the Tax Sale Lands Reserve allocated in the 2017 Financial Plan.

As a result of initial investigations, City staff placed restrictions on digging and exposing of subsurface soils within Laurel Point Park or the adjacent federal lands, to minimize worker exposure, before a more detailed soil management plan was put in place.

At that time, Transport Canada was in progress of completing a remediation plan for the adjacent federal Middle Harbour Fill Site. Preliminary information from Transport Canada indicated that they planned to complete excavation work and off-site disposal of contaminated materials for their sites. Investigation, assessment and planning for the City property were thus expedited by the City to allow for potential coordination of any remediation work to align with planned Transport Canada work, to minimize costs and disruption to the City.

The project timeline below illustrates the current schedule including investigation and planning work that has been completed for the City lands. Should Council approve the additional funding, the remediation would start in Q4 of 2018.



ISSUES & ANALYSIS

Transport Canada Middle Harbour Fill Site

Transport Canada completed their remediation plan for their contaminated Middle Harbour Fill Site lands in 2017. The remediation plan was developed following extensive site investigations and risk assessment. The remediation plan for the federal lands consists of excavation and offsite disposal

and subsequent risk management of residual contamination. This method would consist of excavating soil that has been identified above site specific remediation targets, and/or areas where the soil would be classified as a hazardous waste, if excavated. Excavated materials would be replaced with imported clean granular soil. Following remediation the residual soil contaminant concentrations would be managed under a long term risk management plan.

The federal government has classified Middle Harbour a *Class 1* remediation site in accordance with the Canadian Council of Ministers of the Environment National Classification System for Contaminated Sites. *Class 1* sites consider the type of contaminants, the migration potential and the exposure pathways, and are considered the top priority sites for action.

Remediation of federal lands is planned to include extensive site excavation with depths of up to seven metres. Where excavations are required adjacent to City property, Transport Canada desires to cut or slope-back over City property to ensure ease of soil removal. Contaminants in the cut slope on City property will be removed and disposed by Transport Canada as part of their project scope.

Transport Canada requires access to the City of Victoria Laurel Point Park property, including cut slope encroachment, access roads and stockpiling. This will be formalized in a legal agreement which will include the following elements:

- Restoration of the site will be approximately to pre-existing elevations and grades, with modifications to the slope into the existing and new foreshore.
- Soil will be removed from the site by barge and clean soil will arrive by barge. The barge will likely be located on the west side of Laurel Point, but may vary.
- Transport Canada/Public Services and Procurement Canada will hold exclusive access to the work site for the duration of the construction work.
- Contaminated soil will be transported to a permitted treatment and/or disposal facility. Transport Canada has advised that they cannot specify which facility the soil will go to until after contract award.
- Transport Canada will remove and dispose of all irrigation pipes onsite, without replacement.
- All trees on the construction site will be removed and will not be replaced.
- Transport Canada will reinstate the site with topsoil and sod.
- Restoration of the removed seawall will be with rock rip rap at a stable slope.
- The pathway adjacent to the shoreline will be reinstated with a 4 metre wide gravel pathway. The upper pathway/fire lane will be reinstated as a 3 metre wide gravel pathway.
- An archaeologist will be on-call for the duration of the remediation project. Transport Canada has completed pre-remediation archaeological investigations on the site.
- For the duration of the project there will be on-site security, signage and temporary construction fencing.
- The City of Victoria will be responsible for removal, storage and reinstallation of various assets including public art work placed on federal lands by the City. The estimated cost for the City to carry out this work is \$50,000.
- The City of Victoria will be responsible for maintaining a project information webpage and adding signage redirecting pedestrian traffic on the David Foster Harbour Pathway for the duration of the remediation project.
- The City will pay the full cost of remediation on the City's property, with half the payment provided to Transport Canada before May 31, 2018 and the balance on or before April 1, 2019. Payment will be based on the following:
 - The remediation cost will be based on SLR's cost estimate, plus contingency, less any soil testing and laboratory costs the City will pay directly.
 - Payment for removal of contaminants and imported soil will be based on unit

- measures, ie. tonnes of material, and contract rates.
- Payment for site preparation, water treatment-operation and restoration will be a lump sum value.
- Upon completion of the work, Transport Canada will return any surplus funds to the City, based on actual measured volumes and contract rates.
- The City will have the opportunity to terminate the remediation should the tender for the City's portion of the work exceed the project budget.

The estimated cost of Transport Canada's remediation is approximately \$20 to 25 million (not including contingencies) due to the size of their parcel and scope of their excavation. Transport Canada with Public Services and Procurement Canada is preparing to tender their project in June 2018. Site work is planned to start in September 2018 and will continue for 12 to 18 months. During this period the entire site will remain closed to the public.

City staff have been meeting with representatives of Transport Canada and The Inn at Laurel Point to review the details of the remediation work, develop the construction schedule and engagement strategy since January 2018.

City of Victoria Laurel Point Park Property

Detailed Site Investigation

SLR Consulting Ltd. (SLR) was retained by the City of Victoria to complete a series of environmental site assessments at the Laurel Point Park site in 2016/2017. SLR also completed site investigations, risk assessment and remediation plans for the Transport Canada Middle Harbour Fill Site.

Based on SLR's investigation results, the City property has been considered a contaminated site because various parameters in soil and groundwater were measured at concentrations exceeding applicable regulatory standards including metals; petroleum hydrocarbons; volatile petroleum hydrocarbons; polycyclic aromatic hydrocarbons; chlorophenols; and polychlorinated biphenyls (PCBs).

Site Risk Assessment

Based on the results of the site investigations, SLR completed a site human health and ecological risk assessment. The purpose of this study was to determine the type and nature of any contamination hazards and their risks to human and environmental health.

The City's risk assessment assumes the site will continue to be used as a park into the foreseeable future. This approach sets boundaries for the type and scope of remediation required to meet future uses.

The study identified the following main hazards and risks:

- Repeated exposures for park users does not represent a health concern.
- Soil lead concentrations pose a risk to workers who are subjected to repeated exposures of disturbed soils at 0-3 metre depth, and should only be undertaken with the necessary safeguards in place.
- Petroleum hydrocarbons; chromium, lead, tin and zinc pose a risk to ecological health of deep rooting plants in soil.

- Petroleum hydrocarbons, PCB's, copper, lead and zinc pose risk in excess of baseline provincial standards¹ to marine mammals and ecosystems due to site groundwater discharging to the harbour.

Even if the soils were left undisturbed, there remains a risk to plant life and aquatic ecosystems via mainly underground transmissions pathways. While risks to humans when exposed to sub-surface soils can be adequately managed with additional operational/maintenance controls, only the removal of contamination from the site will mitigate marine and terrestrial ecosystem risks to within acceptable standards.

Based on these results, site specific remediation targets (via soil excavation) have been developed to minimize impacts to human, terrestrial and marine health.

Remediation Plan

The objective of the City remediation plan is to provide an action plan and cost estimate to remediate areas of the site identified based on the risk assessment, which includes the intended future park use. The remediation plan will address soil and groundwater exceeding the contamination thresholds for the site. The plan consists of tree removal, excavation and off-site disposal of the soils with parameter concentrations above the remediation targets to a depth of three metres below grade, which would reduce the probability and severity of contamination transmission to plants and marine ecosystems to within acceptable levels. Excavated materials would be replaced with imported clean granular soil. Following remediation, the remaining soil and groundwater would be routinely assessed and managed via a through-life risk management plan.

Remediation areas are organized into three areas RU1, RU2 and RU3, as shown on Attachment B: City of Victoria Laurel Point Park Remediation Areas. Excavation depths of up to three metres will be required in area RU1 and RU2. Excavation in RU3 will be up to 1 metre deep.

SLR estimates the remediation work can be completed for a cost of \$2.2 million plus applicable taxes and contingency. This assumes the excavation, transport and disposal of contaminated soil in the City property is done in conjunction with the Transport Canada remediation project. Staff recommend a 40% contingency to the project cost estimate. The total project budget including contingency is \$3.1 million.

These costs do not include reinstatement of the park features such as trees, shrubs, amenities, irrigation and pathway paving. As part of the annual financial plan, staff will develop detailed plans and budgets for Laurel Point Park improvements for 2019 and 2020 for Council's consideration. This will include improvements to the David Foster Harbour Pathway through Laurel Point Park.

Future post remediation sampling and risk assessment costs in year 2 are estimated at \$300,000. Verification and monitoring in year 3 to 5 are estimated at \$290,000. This is equivalent to a 0.23% property tax increase.

If the City proceeds with including the City land remediation work as part of the Transport Canada Middle Harbour Fill Site remediation, Transport Canada will pay for all contractor mobilization costs, including barge access ramps, archaeological monitoring services, and tendering service costs. A legal agreement will be required to facilitate this including project budget approval by the City.

¹ Environmental Management Act (2003 as amended), Contaminated Sites Regulation (1997 as amended)

Transport Canada has advised the City they will incorporate our remediation work into their tender provided the legal agreement is executed before May 24, 2018.

OPTIONS & IMPACTS

Option 1 – Proceed with the remediation plan for the City owned Laurel Point Park in conjunction with Transport Canada remediation of adjacent federal lands – Recommended

The risk assessment has identified risks to human and ecological health (including marine receptors) when exposed to contaminated soils and associated groundwater. While sub surface risks to humans can be adequately managed with additional operational/maintenance, only the removal of contamination will mitigate marine and terrestrial ecosystem risks to within acceptable levels.

Staff recommend proceeding with the remediation plan prepared by SLR where excavation, transport and disposal of contaminated soil in the City property is done in conjunction with the Transport Canada remediation project. Remediation of the neighbouring Transport Canada lands will require excavation to depths of seven metres below current grades. This excavation will encroach on the City land with sloping to facilitate the work. Therefore, the most effective and efficient strategy for addressing the contamination risk on the City lands is to use a similar remedial strategy in concert with the adjacent remediation.

Transport Canada's remediation project will utilize heavy equipment and barges, restricting public access to the Laurel Point Park site for approximately 18 months. Cost savings are available to the City with a joint tender with likely economy of scale savings when considering excavation of contaminated soils, transportation, storage and offsite disposal costs. Transport Canada will be covering all contractor mobilization costs, site security, archaeological monitoring services, tender services and the barge setup with a total estimated cost in the order of \$1.2 to \$1.5 million.

Laurel Point Park is a valuable waterfront location offering the public panoramic views of the inner harbour including the downtown core. Environmental remediation to address ecological risks for the long term operation of the park space and David Foster Harbour Pathway is recommended.

Option 2 – Do not proceed with the Remediation Plan

SLR has recommended that the City remediates the contamination exceedances via excavations and disposal, as outlined in the remediation plan. Taking no remediation at this time poses the following challenges and potential risks for the City, which would be incurred if managing the contamination on-site:

- Loss of Laurel Point Park amenity due to incomplete site remediation and restricted park completion/construction.
- Higher future remediation costs, due to escalation and loss of project synergies with Transport Canada (additional costs to the City exceed \$1.5 million).
- Potential repeated site disturbances if City plans to remediate at a future date.
- Restricted future site development, and impacts to planned David Foster Harbour Pathway upgrades in this area.
- Requirement to establish long-term and detailed site monitoring (soil, groundwater), operational, and maintenance programs to accommodate for City ongoing management of park soil contamination.
- Requirement to demonstrate acceptable risk mitigations to higher levels of government.

Deferral or a decision not to proceed with any remediation would necessitate a number of required mitigations noted above, which constitute several costs to the City, alongside any residual unmitigated human and environmental health risks. Costs to provide ongoing management of controls in this area will likely exceed \$75,000 annually, and remove the potential for optimising park/pathway amenities. Failing to align with the federal remediation plans will result in a loss of \$1.5 million in 2018/19 efficiencies.

Should Council proceed with this option, an agreement will still be required to allow Transport Canada access over City property to facilitate remediation of federal lands.

2015 – 2018 Strategic Plan

The recommended option supports the David Foster Harbour Pathway Program and is consistent with Objective 8: Enhance and Steward Public Spaces, Green Spaces and Food Systems and Objective 9: Complete a Multi-Modal and Active Transportation Network.

Accessibility Impact Statement

During remediation the entire site will remain closed to the public. Pedestrians, including for those in wheelchairs or with mobility devices, will be re-routed. As a part of the 2019 and 2020 work to develop plans and budgets for long-term park and pathway improvements, the City will ensure accessibility reviews are undertaken to integrate accessibility enhancements into the Laurel Point area.

Impacts to Financial Plan

The remediation plan has a total estimated cost, including contingencies, of \$3.1 million.

Environmental remediation of City properties is typically funded by the Tax Sale Lands Reserve which has a current unallocated balance of approximately \$4.6 million. Allocation of this project funding will reduce the reserve balance to approximately \$1.5 million.

SLR estimates future post remediation sampling and risk assessment costs in year 2 at \$300,000. Verification and monitoring in year 3 to 5 are estimated at \$290,000. This is equivalent to a property tax increase of 0.23%. Staff will report back to Council in year 2019 as part of the annual budget process with updates and approvals for future park design and construction proposals, and through-life, post remediation sampling and risk assessment costs.

As part of Transport Canada's remediation, the City will be responsible for removal, storage and reinstallation of various assets placed on federal lands by the City. The estimated cost for the City to carry out this work is \$50,000. This work is independent of the City property remediation and is not included in the remediation estimate of \$3.1 million. It is recommended this work is funded from the 2018 Contingencies budget.

Official Community Plan Consistency Statement

This works supports the David Foster Harbour Pathway Program and actions in the Official Community Plan under Goal 7: Transportation and Mobility (specifically 7B, 7.16.7), Goal 8 – Placemaking (specifically 8B, 8.14 and 8.16) and Environmental goals (10A & 10B).

CONCLUSIONS

Based on site investigation results, the Laurel Point Park property is considered a contaminated site because various parameters in soil and groundwater were measured at concentrations exceeding applicable regulatory standards.

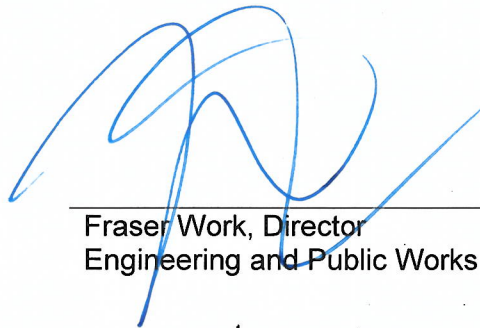
The risk assessment has identified risks to human and ecological health when exposed to soils and marine ecosystems subjected to contaminants transmitted via underground pathways. While sub surface risks to humans can be adequately managed with additional operational/maintenance, only the removal of contamination will mitigate marine and terrestrial ecosystem risks to acceptable levels. The remediation plan recommends excavation and off-site disposal of the soils with parameter concentrations above the remediation targets.

Transport Canada is proceeding with remediation of adjacent federal lands and the opportunity exists to jointly tender the work. Staff recommend proceeding with the remediation plan for the City owned Laurel Point Park.

Respectfully submitted,



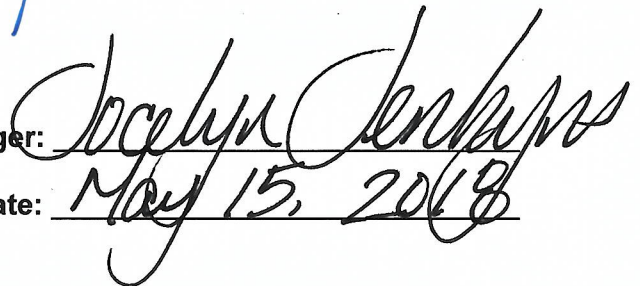
Jas Paul, Assistant Director
Engineering



Fraser Work, Director
Engineering and Public Works

Report accepted and recommended by the City Manager:

Date:


May 15, 2018

List of Attachments

Attachment A: Historic Photos

Attachment B: City of Victoria Laurel Point Park Remediation Areas